

Appln No. 09/619,125
Amdt date December 23, 2003
Reply to Office action of October 23, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A feedforward filter, the feedforward filter comprising:
a plurality of feedforward filter taps, including a feedforward filter reference tap
a coefficient for each feedforward filter tap; and
wherein the reference tap is located proximate a center position of the feedforward filter and a value of the coefficient of the reference tap is greater than a value of each of the coefficients of each of the other feedforward filter taps.
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2. (Original) The feedforward filter as recited in claim 1, wherein the reference tap is located at a center position of the feedforward filter.
3. (Cancelled)
4. (Currently Amended) A receiver comprising:
a feedforward filter coupled to process signals received by the receiver, the feedforward filter having a plurality of feedforward filter taps, including a feedforward filter reference tap;

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a feedback filter coupled to receive signals representative of an output of the feedforward filter, the feedback filter having a plurality of feedback filter taps; and

wherein the feedforward filter reference tap is located proximate a center position of the feedforward filter, so as to enhance noise cancellation and each of the feedforward filter taps has a coefficient and a value of the coefficient of the feedforward filter reference tap is greater than a value of each of the coefficients of each of the other feedforward filter taps.

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5. (Original) The receiver as recited in claim 4, wherein the feedforward filter reference tap is located at a center position of the feedforward filter.

6. (Cancelled)

7. (Original) The receiver as recited in claim 4, wherein each of the feedback filter taps has a coefficient and a value of at least one of the coefficients of the feedback filter taps is clamped so as to mitigate error propagation.

8. (Original) The receiver as recited in claim 4, wherein each of the feedback filter taps has a coefficient and a value of each of the coefficients of the feedback filter taps is clamped so as to mitigate error propagation.

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9. (Original) The receiver as recited in claim 4, wherein the feedforward filter and the feedback filter cooperate to at least partially define a decision feedback equalizer.

10. (Original) The receiver as recited in claim 4, wherein the feedforward filter and the feedback filter cooperate to define a portion of a DSL receiver.

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11. (Currently Amended) A transceiver comprising:

a transmitter;

a receiver, the receiver comprising:

a feedforward filter coupled to process signals received by the receiver, the feedforward filter having a plurality of feedforward filter taps, including a feedforward filter reference tap;

a feedback filter coupled to receive signals representative of an output of the feedforward filter, the feedback filter having a plurality of feedback filter taps; and

wherein the feedforward filter reference tap is located proximate a center position of the feedforward filter, so as to enhance noise cancellation and each of the feedforward filter taps has a coefficient and a value of the coefficient of the feedforward filter reference tap is greater than a value of each of the coefficients of each of the other feedforward filter taps.

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12. (Original) The transceiver as recited in claim 11, wherein the feedforward filter reference tap is located at a center position of the feedforward filter.

13. (Cancelled)

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14. (Original) The transceiver as recited in claim 11, wherein each of the feedback filter taps has a coefficient and a value of at least one of the coefficients of the feedback filter taps is clamped so as to mitigate error propagation.

15. (Original) The transceiver as recited in claim 11, wherein each of the feedback filter taps has a coefficient and a value of each of the coefficients of the feedback filter taps is clamped so as to mitigate error propagation.

16. (Original) The transceiver as recited in claim 11, wherein the feedforward filter and the feedback filter cooperate to at least partially define a decision feedback equalizer.

17. (Original) The transceiver as recited in claim 11, wherein the feedforward filter and the feedback filter cooperate to define a portion of a DSL transceiver.

18. (Currently Amended) A communication system comprising:
a plurality of transceivers, at least two of which are configured to communication with one another and comprising:
a transmitter;

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a receiver, the receiver comprising:

a feedforward filter coupled to process signals received by the receiver, the feedforward filter having a plurality of feedforward filter taps, including a feedforward filter reference tap;

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a feedback filter coupled to receive signals representative of an output of the feedforward filter, the feedback filter having a plurality of feedback filter taps; and

wherein the feedforward filter reference tap is located proximate a center position of the feedforward filter, so as to enhance noise and each of the feedforward filter taps has a coefficient and a value of the coefficient of the feedforward filter reference tap is greater than a value of each of the coefficients of each of the other feedforward filter taps.

19. (Original) The communication system as recited in claim 18, wherein the feedforward filter reference tap is located at a center position of the feedforward filter.

20. (Cancelled).

21. (Original) The communication system as recited in claim 18, wherein each of the feedback filter taps has a coefficient and a value of at least one of the coefficients of the feedback filter taps is clamped so as to mitigate error propagation.

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22. (Original) The communication system as recited in claim 18, wherein each of the feedback filter taps has a coefficient and a value of each of the coefficients of the feedback filter taps is clamped so as to mitigate error propagation.

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23. (Original) The communication system as recited in claim 18, wherein the feedforward filter and the feedback filter cooperate to at least partially define a decision feedback equalizer.

24. (Original) The communication system as recited in claim 18, wherein the feedforward filter and the feedback filter cooperate to define a portion of a DSL transceiver.

25. (Currently Amended) A method for mitigating noise in a communication device, the method comprising:

filtering a received signal with a feedforward filter, the feedforward filter comprising:

a plurality of feedforward filter taps, including a feedforward filter reference tap;

a coefficient for each feedforward filter tap; and

wherein the reference tap is located proximate a center position of the feedforward filter and a value of the coefficient of the reference tap is greater than a value of each of the coefficients of each of the other feedforward filter taps.

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26. (Original) The method as recited in claim 25, wherein the reference tap is located at a center position of the feedforward filter.

27. (Cancelled)

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28. (Original) The method as recited in claim 25, further comprising:

filtering the received signal with a feedback filter, the feedback filter having a plurality of feedback filter taps; and

wherein each of the feedback filter taps has a coefficient and a value of at least one of the coefficients of the feedback filter taps is clamped so as to mitigate error propagation.

29. (Original) The method as recited in claim 25, further comprising:

filtering the received signal with a feedback filter, the feedback filter having a plurality of feedback filter taps; and

wherein each of the feedback filter taps has a coefficient and a value of each of the coefficients of the feedback filter taps is clamped so as to mitigate error propagation.

30.-97. (Cancelled)